

CLAIMS

WE CLAIM:

1. An electro-optical modulator, comprising:
a modulator chip having a low impedance; and
a microwave input chip, coupled to the modulator chip,
having a thin film resistor with a low impedance for increasing the
total input impedance of the modulator.
2. The electro-optical modulator of Claim 1, wherein the
modulator chip comprises a Lithium Niobate chip.
3. The electro-optical modulator of Claim 1, further comprising a
microstrip line or coplanar line in the microwave input chip, the thin film
resistor being placed in the microstrip line or in the coplanar line.
4. The electro-optical modulator of Claim 3, wherein the
microstrip line or coplanar line is a straight line.
5. The electro-optical modulator of Claim 3, wherein the
microstrip line comprises a first section of a microstrip line and a second
section of a coplanar waveguide.

6. The electro-optical modulator of Claim 3, wherein the microstrip line or coplanar line comprises a curved line.

7. The electro-optical modulator of Claim 1, further comprising a plurality of bondings for coupling the microwave input chip to the Lithium Niobate chip.

8. The electro-optical modulator of Claim 1, further comprising an RF connector coupled to an input of the microwave input chip.

9. The electro-optical modulator of Claim 1, wherein the microwave input chip is manufactured with a substrate of Alumina, Gallium Arsenide, Aluminum Nitride or other type of substrates commonly used for microwave applications.

10. An electro-optical modulator, comprising:
a modulator chip having a low impedance; and
a microwave input chip, coupled to the modulator chip, having a resistive means with a low impedance for increasing the total input impedance of the modulator.

11. The electro-optical modulator of Claim 10, wherein the resistive means comprises a thin film resistor.

12. The electro-optical modulator of Claim 10, wherein the resistive means comprises a lumped resistance.

13. The electro-optical modulator of Claim 10, wherein the modulator chip comprises a Lithium Niobate chip.

14. The electro-optical modulator of Claim 10, further comprising a microstrip line or coplanar line in the microwave input chip, the thin film resistor being placed in the microstrip line or coplanar line.

15. The electro-optical modulator of Claim 14, wherein the microstrip line or coplanar line is a straight line.

16. The electro-optical modulator of Claim 14, wherein the microstrip line comprises a first section of a microstrip line and a second section of a coplanar waveguide.

17. The electro-optical modulator of Claim 14, wherein the microstrip line or coplanar line comprises a curved line.

18. The electro-optical modulator of Claim 10, further comprising a plurality of bondings for coupling the microwave input chip to the Lithium Niobate chip.

19. The electro-optical modulator of Claim 10, further comprising an RF connector coupled to an input of the microwave input chip.

20. The electro-optical modulator of Claim 10, wherein the microwave input chip is manufactured with a substrate of Alumina, Gallium Arsenide, Aluminum Nitride or other type of substrates commonly used for microwave applications.